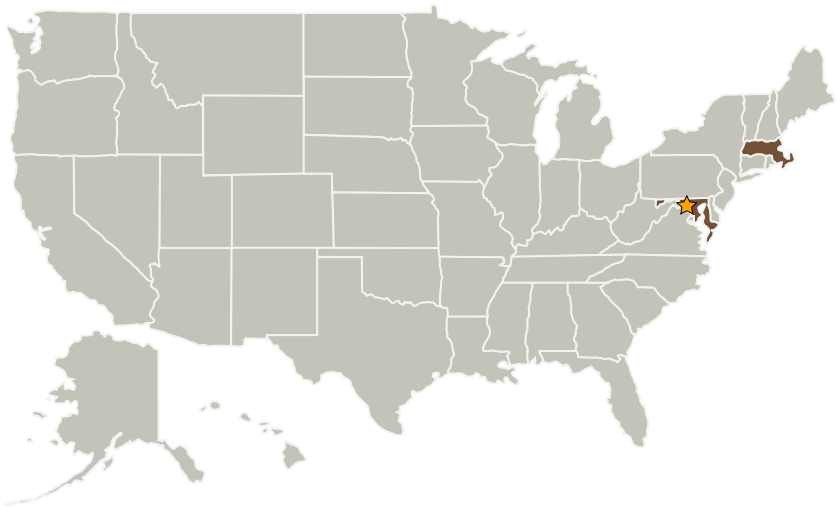
Hybrid Ocean Wind Sensor (HOWS), Phase I

Completed Technology Project (2008 - 2008)

Project Introduction

This proposed Phase I effort will investigate and develop the necessary innovations to realize the Hybrid Ocean Wind Sensor system that will provide critical measurements to support the XOVWM planned for 2014 and serve as a true testbed for this mission by providing active and passive, C and Ku-band measurements of the ocean surface from high altitude platforms. The Phase I effort will focus on developing the HOWS system design and determining the design and feasibility to realize a low loss electronic steering, dual beam antenna and a low power, compact transceiver module that supports active and passive remote sensing of the ocean vector wind. The proposed HOWS system will acquire measurements critical to assessing the design of the next generation scatterometer missions planned for 2014 (XOVWM). The HOWS system also fulfill a critical need of TPC/NHC for continuous, accurate, wide area coverage of the oceans surface vector wind field and provide hurricane researchers at HRD and other institution with critical measurements to improving the understanding of tropical cyclone intensification. The NASA Global Hawk UAV and the NOAA G-IV aircraft are just two potential platforms for this instrument. With its lower power, stealthy active and passive design, it is perfectly suited for military theatre operations and search and rescue operations over the ocean.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
Remote Sensing Solutions, Inc.	Supporting Organization	Industry	Barnstable, Massachusetts

Primary U.S. Work Locations	
Maryland	Massachusetts

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

James R Carswell

Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.4 Microwave, Millimeter-, and Submillimeter-Waves